



MEMORANDUM OF UNDERSTANDING
BETWEEN THE
U.S. DEPARTMENT OF THE INTERIOR
AND THE
U.S. DEPARTMENT OF COMMERCE
TO COORDINATE AND COOPERATE IN CLIMATE-RELATED ACTIVITIES
INVOLVING
SCIENCE, SERVICES, MITIGATION, ADAPTATION, EDUCATION, AND
COMMUNICATION

Article I. Parties and Purpose

The U.S. Department of the Interior (hereinafter referred to as DOI) and the U.S. Department of Commerce (hereinafter referred to as DOC), together referred to as the Parties, have related responsibilities in a number of climate-related program areas. It is in the national interest that such programs be closely coordinated and mutually supportive.

DOI Mission: The DOI protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated Island Communities. The DOI's climate-related scientific capabilities investigate physical and biological responses to changing conditions, including climate variability and change, and to design and monitor adaptive management strategies for the natural and cultural resources DOI manages in the face of a changing climate.

DOC Mission: The DOC creates the conditions for economic growth and opportunity by promoting innovation, entrepreneurship, competitiveness, and stewardship. This has evolved, as a result of legislative and administrative additions, to encompass broadly the responsibility to foster, serve, and promote the Nation's economic development and technological advancement. While there are many agencies of DOC that will have some responsibilities in this agreement (e.g. National Institute of Standards and Technology, International Trade Administration), primary leadership will be provided by the National Oceanic and Atmospheric Administration (hereafter referred to as DOC/NOAA).

DOC/NOAA's mission is to understand and predict changes in the Earth's environment and conserve and manage coastal and marine resources to meet our Nation's economic, social, and environmental needs. DOC/NOAA has broad responsibility to observe, understand, describe,

and predict the state of the climate system and its impacts on coastal ecosystems, protected species and ocean fisheries through integrated observation, analysis, and data stewardship. DOC/NOAA also has extensive responsibilities for the management and conservation of marine ecosystems, fisheries, mammals, endangered species, coral reefs, habitat, and places, including ocean, coastal and estuarine protected areas.

While DOI and DOC's strengths and missions are clearly differentiated, they share common interests and issues, especially in the cross-cutting area of a changing climate. This Memorandum of Understanding (MOU) will enable the seamless coordination of:

- DOI's climate change impact science and resource-related land, water, wildlife, fish, marine, and tribal and cultural adaptive resource management expertise
- DOC/NOAA's climate science, climate modeling at appropriate scales, and coastal, marine, and hydrologic expertise to support resource management and resource protection
- DOI and DOC's mutual data stewardship responsibilities, and monitoring, assessment, and communication expertise

Effective approaches to understanding and responding to a changing climate require multidisciplinary and integrated approaches that draw on distinct as well as complementary assets of the different agencies. For example, recent science-based trust resource issues, such as the listing of the polar bear and some salmonids as threatened species and the completion of national and intergovernmental climate assessments required rigorous interagency coordination and cooperation. It also is clear that there is a great need for improved tools to support coordinated strategic land and water resource management strategies and related activities, such as drought and flood risk management, conservation and restoration measures, conservation easements, and other actions conducted in an integrated manner and at appropriate scales to address the impacts of a changing climate on natural and cultural resources. Thus, the different scientific and management expertise and trust responsibilities within and across DOC (with emphasis on the climate system, coastal/marine resource management and adaptation, and commerce) and DOI (with emphasis on adaptation and management of natural and cultural trust resources in a changing climate), as well as their areas of commonality (significant science capacities, resource management, and trust resource protection responsibilities) provide for great opportunities in leveraging existing partnerships and in developing new ones to better understand and respond to the impacts of a changing climate.

Therefore, the purpose of this MOU is to establish a framework for increased cooperation and coordination between DOI and DOC that builds on existing partnerships, identifies other areas of mutual concern, and leads to undertaking new efforts as appropriate. This MOU is designed to enhance the working relationships of DOI and DOC scientists, data managers, climate information providers, resource managers, and others to work together to achieve the common vision outlined below, when appropriate, to meet the Nation's needs for addressing the challenges of a changing climate. The MOU provides a strategic vision for the partnership and coordination of existing and planned DOI and DOC climate change science, service, adaptation, mitigation, education and communication programs; the incorporation of existing DOI and DOC agreements; and the development of new implementing agreements as needed.

This MOU specifically addresses the Office of Management and Budget's request that DOI and DOC become more harmonious in their coordination of their climate change programs, including the coordination of regional components and centers. This MOU helps ensure a coordinated Federal effort for delivering the science, analysis, modeling, predictions/projections, and assessment of the impacts of a changing climate for managing ecosystems and marine, coastal and terrestrial resources.

Vision and Motivation

The framework outlined herein will build collaborative partnerships to transform climate information into actionable knowledge, and to invest in effective mechanisms and methods for interagency cooperation, communication, and coordination. This framework will thus enable better decisions and policies relating to a changing climate. Among the issues are:

- Understanding the impacts
- Assessing vulnerability
- Enhancing resilience
- Monitoring changes in Earth systems
- Improving data acquisition, sharing, stewardship, integration, and dissemination
- Supporting the development and implementation of science-based strategies, plans and decision support tools for adaptation and mitigation
- Providing technical assistance and training as needed to effectively enhance adaptation and mitigation
- Communicating impacts of a changing climate to scientists, decision-makers, and the public
- Implementing management strategies to make DOI and DOC/NOAA trust resources more resilient to the impending impacts of climate change and other related stressors

Throughout this document, the following definitions are used, as defined by the Intergovernmental Panel on Climate Change:

- *Impacts*: The effects of climate change on natural and human systems
- *Vulnerability*: Vulnerability is the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity
- *Resilience*: The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change

Throughout this document, our references to adaptation and mitigation include the various strategies and activities related to obtaining and using scientific information to better understand adaptation and mitigation options, and it includes various resource management, conservation and restoration measures in support of adaptation and mitigation.

Article II. Scope

This MOU serves as an umbrella agreement that sets forth the general terms and conditions under which the Parties will coordinate and cooperate in domestic and international climate-related activities involving science, services, adaptation, mitigation, education, and communication. This MOU will serve the conservation, management, educational, scientific, and service mission and trust responsibilities of the Parties, by enhancing interagency partnerships and communication on mutual goals and interests in sustaining the economic, social, and environmental benefits of natural and cultural resources in a changing climate.

This work will build upon and facilitate partnerships between the existing national and regional structures developed by each Department, including but not limited to, DOI's Climate Science Centers and Landscape Conservation Cooperatives, and DOC/NOAA's Regional Integrated Sciences and Assessment teams, Regional Climate Centers, and climate services. This MOU includes an emphasis on identifying joint or mutual funding and collaboration opportunities between DOI and DOC for the following areas: (1) scientific research; (2) the acquisition, integration and dissemination of climate data; and, (3) partnerships on the construction of new climate change models (including regional-scale models), risk and vulnerability assessments, (including in support of National Assessment activities), the development of regional and local scale decision support tools, development of adaptive management strategies and environmental monitoring, the integration of climate projections or global climate change models with physical and biological process models and cooperation on carbon monitoring, mitigation and sequestration techniques to maximize energy resource and greenhouse gas management. The following are examples of mutually shared management and science challenges for the two Departments:

- a. Threatened and endangered species, trust resources (including living marine resources), and protected areas
- b. Sea level rise, inundation, and erosion (including impacts on natural and cultural resources as well as public and private investments and infrastructure)
- c. Impacts of ocean acidification
- d. Water availability and quality for economic, energy, and ecological needs
- e. Climate-related extreme events
- f. Changes in the Arctic and Antarctic
- g. Invasive species and land use change
- h. Coastal and marine area management

It is anticipated that achieving the vision will use existing and new implementing agreements, as appropriate, that draw upon capabilities and assets that support the following areas:

1. Studies of the physical climate system, including research, observations, monitoring, and modeling of chemical, physical, and biological processes in the atmosphere, oceans, fresh water, terrestrial and polar regions, including but not limited to:
 - a. Examination of mapping and observations networks to identify opportunities for developing comprehensive and integrated monitoring capabilities with common standards and protocols

2. Assessment of climate change impacts and vulnerabilities (including extreme events, effects on terrestrial, fresh water, estuarine, coastal, ocean, and cryospheric ecosystems and on natural, cultural and human resources). Critical elements of this are to:
 - a. Establish and maintain a sustained regional and sectoral assessment program, contributing to the National Assessment responsibilities under the Global Change Research Act
 - b. Develop and use common standards, specifications and guidelines for climate change impact monitoring and prediction
3. Development and implementation of specific adaptation strategies. These strategies will be key to guiding and facilitating the development and implementation of strategic actions at appropriate spatial and temporal scales (such as resource management, conservation and restoration activities, marine spatial planning, and land or resource acquisitions or easements), as well as strategies that enhance decision-making through the use of climate information, products and services.
4. Cooperation and collaboration through regional science and services. For example:
 - a. Cooperatively determining data needs at relevant scales for achieving agency missions to answer resource management questions
 - b. Joint implementation of regional climate centers and collaborative partnerships
 - c. Improving geospatial infrastructure and coordinating mapping efforts to establish quality baseline datasets as basis for boundaries, modeling and other scientific investigations (such as sea level change, erosion, habitat, water level forecasts, etc.).
 - d. Building capacity of science and management partners at multiple levels and sectors (public and private).
5. Methods for monitoring, reducing, and sequestering greenhouse gases and best practices for carbon management (including assessment of the carbon reduction benefits of conservation, restoration and adaptation projects, including various conservation and restoration activities).
6. Training, education, communication and capacity building.
7. Development and implementation of shared standards and protocols for data acquisition, sharing, integration, dissemination and stewardship, (including ocean and coastal surveying, mapping, geographic information systems, and satellite, remote sensing and in situ observing systems).
8. Sharing expertise and tools and technologies (including the collocation or sharing of personnel).

The Parties shall endeavor to implement all of the cooperative activities according to acknowledged national and international best practices and standards and shall conform to existing and emerging executive orders and other official guidance.

Article III. Agreements and Responsibilities

The Parties agree to:

- Develop a DOI and DOC Interagency Committee for Program Coordination. The primary responsibility of the Committee will be to coordinate related programs and research within the full range of interface between the Parties (see Article IV)
- Build upon and facilitate partnerships between the existing and emerging national and regional structures developed by each Department, including but not limited to DOI's Climate Science Centers and Landscape Conservation Cooperatives, and DOC/NOAA's Regional Integrated Sciences and Assessments teams and Regional Climate Centers and emerging climate services
- Develop a regional implementation strategy for collaborative regional climate change science, assessments, information services, adaptation and mitigation activities
- Identify funding and collaboration opportunities
- Cooperate in areas of mutual interest and share data, information, and findings of mutual concern
- Develop Implementing Agreements between DOI and DOC for specific work when mutually beneficial and agreeable
- Cooperate and support the operation of all programs of mutual interest from local to international in scale
- Regularly provide updates on program activities, technology application, information delivery, development and related work pertaining to cooperative activities pursued under this MOU

Article IV. Implementation

The DOI and DOC Interagency Committee for Program Coordination that will be established pursuant to Article III of this MOU will be jointly chaired by the climate leads of each Department, as nominated by the Secretary of Commerce and the Secretary of the Interior. The Secretaries will also appoint the Committee members. The Committee will have no more than 14 members, equal numbers from DOI and DOC that broadly represent the diverse interests of each Department. The Committee will have the authority to set priorities and establish, review, evaluate, and approve climate-related implementing agreements (developed by formal or informal interagency working groups), including renewal of existing agreements that fall under the scope of this MOU. For agreements that pertain solely to the transfer of funds, the Committee will only review them after the organization contributing the funds has given approval. The Committee will meet at least quarterly and have a virtual process in place to expedite review of implementing agreements so as not to lengthen the overall approval time.

Actions undertaken in support of this MOU can be documented in new or existing written implementing agreements, as set forth in Article V (paragraph 1).

The Parties shall each fund their own participation in the Committee. Within 1 year of the effective date of this MOU, the Committee will submit a progress report to the Secretary of

Commerce, the Under Secretary of Commerce for Oceans and Atmosphere, and the Secretary of the Interior.

Other responsibilities include:

1. The Departments should immediately identify points of contact (POCs) at the national level for interagency coordination in the dissemination and implementation of this MOU.
2. The POCs should facilitate this MOU by identifying national, regional, and site level personnel to participate on working groups to develop specific climate-related implementing agreements focused on individual elements of the MOU. This does not preclude informal groups from developing implementing agreements and sharing them with the POC and Committee for consideration. Other public and private partners should be included as appropriate. Interagency working groups, as appropriate, should be formed within 60 days of signature. Their recommendations should be included in the first year evaluation report as required above.
3. The POCs should identify each Department's review and clearance personnel needed to clear any proposed actions that require a review (e.g. interagency transfer of funds). This shall include the Office of General Counsel, responsible managers, and signatory authorities. The POCs should develop estimates for the time needed to complete internal review and clearance, so that staffs are aware of this for planning purposes.
4. The POCs should identify existing activities already underway that reflect the priorities in this MOU, to take advantage of immediate opportunities for maximizing efficiency in the use of resources and to learn from experiences.
5. Any exchange of funds, property, personnel, or services authorized under this MOU shall be supported by implementing agreements and be subject to existing authorities, policies and processes for transfers between designated representatives of the Secretary of the Interior, the Secretary of Commerce, and the Under Secretary of Commerce for Oceans and Atmosphere. Implementing agreements should include the following information:
 - Description of product(s) and or service(s) to be supplied
 - Description of financial arrangements including termination costs and specific staffing arrangements and assignments
 - Legal authority citations
 - Agency responsibilities
 - Production and or delivery schedules
 - Reference to disposition of government property, if applicable
 - Duration of the plan/project; and performance periods of all tasks
 - Reference to required disputes resolution procedures
 - Fiscal and accounting information, including fiscal year availability of funds
 - Programmatic, technical, and fiscal points of contact
 - International cooperation and capacity building to address climate change, as appropriate

Additional information may be provided as required or appropriate. Implementing agreements may be modified by mutual consent.

Updates on program activities, technology application, development, and related work pertaining to cooperative activities pursued under this MOU will occur through written correspondence, quarterly meetings of the joint DOI and DOC Committee for Program Coordination, and other mechanisms.

The point of contact within DOI for this MOU is the Secretary of the Interior, or his or her designee. The point of contact within DOC for this MOU is the Secretary of Commerce, or his or her designee.

Article V. Financial Arrangements

This MOU is neither a fiscal nor funds obligation document. Any activities involving transfer of funds between the Parties of this MOU will be handled in accordance with applicable laws, regulations, and procedures. Such activities will be documented in separate supporting agreements, with specific activities between the Parties spelled out. The separate agreements will reference this MOU. This MOU does not establish authority for noncompetitive award among the Parties for any contract or other agreement.

This MOU defines in general terms the basis on which the Parties will cooperate, and as such, does not constitute a financial obligation to serve as a basis for expenditures. Financial support for human resources, equipment, supplies, facilities, training, public information, and expertise will be provided by each signatory Department to the extent that their participation is required and resources are available.

This MOU in no way restricts the Parties from participating in similar activities or arrangements with other public or private agencies, organizations, or individuals.

This MOU does not obligate the Parties to expend appropriations on any particular project or purpose or to enter into any agreements, contracts, or other obligations, even if funds are available.

It is the intent of this MOU to facilitate the joint development and announcement of funding opportunities that will establish activities that contribute to achieving the vision of this MOU.

Article VI. Terms of Understanding

Effective date: This MOU shall take effect upon the date of the last signature.

FACA: The Parties will comply with the Federal Advisory Committee Act to the extent it applies.

Modification: This MOU may be renegotiated, amended, or modified at any time by mutual agreement of the Parties.

Renewal: This MOU may be renewed for additional periods of 5 years, by mutual written consent of the Parties.

Termination: This MOU shall remain in effect for a period of 5 years from the date of the last signature. This MOU may be terminated by either Department by providing written notice and explanation to the other Department at least 90 calendar days in advance of the effective date of termination. The termination of this MOU shall not affect the validity of duration of activities or agreements under this MOU which are initiated prior to each termination.

Review: This MOU shall be reviewed annually at one of the regularly scheduled meetings of the DOI and DOC Interagency Committee for Program Coordination to determine continuing need and whether the Agreement should be revised, renewed, or canceled.

Article VII. Authorities

The authorities of DOI to enter into implementing agreements under this MOU include, but are not limited to:

- National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. §§ 668dd-668ee) -- This Act, derived from sections 4 and 5 of Public Law 89-669 (October 15, 1966; 80 Stat. 927), constitutes an "organic act" for the National Wildlife Refuge System. It was recently amended by P.L. 105-57, "The National Wildlife Refuge System Improvement Act of 1997."
- The Federal Land Policy and Management Act (FLPMA) of 1976 (Bureau of Land Management)
- Fish and Wildlife Conservation Act (16 U.S.C. §§ 2901, et. seq., as amended and supplemented)
- Endangered Species Act (16 U.S.C. §§ 1531, et. seq., as amended and supplemented)
- Marine Mammal Protection Act (16 U.S.C. §§ 1361, et seq., as amended and supplemented)
- Fish and Wildlife Conservation Act (16 U.S.C. §§ 2901, et. seq., as amended and supplemented)
- Endangered Species Act (16 U.S.C. §§ 1531, et. seq., as amended and supplemented)
- Public Law 99-59 1--provides in fiscal year 1997 and thereafter that the USGS has permanent authority to "prosecute projects in cooperation with other agencies, Federal, State, and private" (43 U.S.C. § 36c)
- The USGS Organic Act of March 3, 1879, as amended (43 U.S.C. §§ 31 et seq.)
- National Park Service Organic Act (16 U.S.C. § 1, et seq., as amended and supplemented)
- Migratory Bird Treaty Act of 1918 (16 U.S.C. sec. 703-712)
- Migratory Bird Conservation Act of 1934 (16 U.S.C. sec 715 et seq.)
- Executive Order 13186, 66 Fed. Reg. 3853 (January 17, 2001) Responsibility of Federal Agencies to Protect Migratory Birds
- The Land Remote Sensing Policy Act (15 U.S.C. § 5601, et seq.)

The authorities of DOC to enter into Implementing Agreements under this MOU include, but are not limited to:

- Coast and Geodetic Survey Act (33 U.S.C. §§ 883a- 883I)
- National Weather Service Organic Authority (15 U.S.C. § 313)
- National Marine Sanctuaries Act (16 U.S.C. § 1431, et seq.)
- Coastal Zone Management Act (16 U.S.C. § 1456c, et seq.)
- Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801, et seq.)
- National Climate Program Act (15 U.S.C. § 2901, et seq.)
- National Integrated Drought Information System Act (15 U.S.C. § 313d)
- Marine Mammal Protection Act (16 U.S.C. § 1361, et seq.)
- Global Change Research Act (15 U.S.C. § 2931, et seq.)
- Tsunami Warning and Education Act (33 U.S.C. § 3201, et seq.)
- Ocean and Coastal Mapping Integration Act (33 U.S.C. § 3501, et seq.)
- Coral Reef Conservation Act (16 U.S.C. § 6401, et seq.)
- National Coastal Monitoring Act (33 U.S.C. § 2801, et seq.)
- Hydrographic Services Improvement Act (33 U.S.C. § 892, et seq.)
- Ocean Dumping Act (33 U.S.C. § 1441, et seq.)
- Federal Ocean Acidification Research and Monitoring Act (33 U.S.C. § 3701, et seq.)
- Integrated Coastal and Ocean Observation Act of 2009 (33 U.S.C. § 3601, et seq.)
- Coastal and Estuarine Land Conservation Program Act (16 U.S.C. § 1451-1)
- Harmful Algal Bloom and Hypoxia Research and Control Act
- Inland Flood Forecasting and Warning System Act

The Secretary of Commerce is authorized to use, subject to the limits of available appropriations, the land, services, equipment, personnel, and facilities of any department, agency, or instrumentality of the United States, or of any state, local government, Indian tribal government, territory or possession, or of any political subdivision thereof, or of any foreign government or international organization for purposes related to carrying out the responsibilities of any statute administered by the National Oceanic and Atmospheric Administration. (Department of Commerce Appropriations Act, 2010, P.L. 111-117).

The Secretary of the Interior is authorized to accept lands, buildings, equipment, other contributions and, before, on, and after November 13, 1991, fees to be deposited in the contributed funds account from public and private sources, and to prosecute projects using such contributions and fees in cooperation with other Federal, state or private agencies. (43 U.S.C. § 1473a).

To the extent future grants and or cooperative agreements are issued by DOI or DOC to any vendor or university, they will be issued pursuant to Federal statute, OMB Circular A-102 (Grants and Cooperative Agreements with state and local governments), and will adhere to Federal Acquisition Regulation (FAR) 6.002 and other applicable Federal laws and regulations.

Article VIII. Publications and Release of Information

Publications documenting cooperative efforts may be prepared by either Party, or jointly, provided that both Parties have an opportunity to review manuscripts prior to publication. To the extent possible, decisions involving authorship credits, review of reports, and other conditions and circumstances will be addressed through interagency agreements referencing this MOU.

Should differences of viewpoint occur, an effort will be made to reconcile them; however, the existence of disagreements shall not prohibit either Department from publishing data, reports or articles provided the publishing Department assumes sole responsibility and gives appropriate credit to the other Department. Neither DOI nor DOC will make editorial changes to the portions of joint documents drafted by the other Department without full knowledge and consent of the other Party.

The Parties agree that sharing credit is mutually beneficial, and will make every effort to assure that appropriate citation and attribution, including the use, with permission, of official Department and agency visual identifiers, is given for work performed under this MOU.

Publicity and public information products, including news releases, reports, briefing papers, or other information products, are subject to the same terms and conditions as other publications as stated above. Any commitment of either Party to preserve the confidentiality of information is subject to applicable United States laws and regulations.

The Parties agree to consult in responding to any requests under the Freedom of Information Act (5 U.S.C. § 552) or other authorities for disclosure of any information generated as a result of this collaborative effort. Consultations will be conducted expeditiously to enable the agency that is responsible for responding to the FOIA request to do so within statutory or other timelines. The Parties agree that any decision to assert FOIA disclosure exemptions will comport with Government policies concerning the identification of any reasonably foreseeable harm that could result from disclosure.

Article IX. Other Provisions

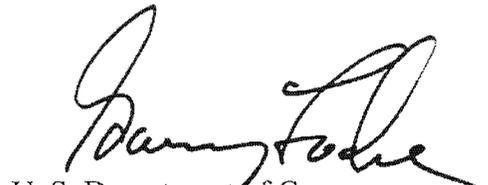
Nothing herein is intended to conflict with current DOI or DOC regulations, directives, or policies. If the terms of this MOU are inconsistent with existing regulations, directives, or policies of either of the Departments, those portions of this MOU that are determined to be inconsistent shall be invalid but the remaining terms and conditions not affected by the inconsistency shall remain in full force and effect. All necessary changes will be accomplished by either a modification to this MOU or by execution of a new agreement.

Article X. Authorized Representatives

Officials authorized to enter into Interagency Agreements referencing this MOU are identified in Agency Manuals, Department Administrative Orders, and Delegations of Authority, as applicable.

Article XI. Approval


U. S. Department of the Interior


U. S. Department of Commerce

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